

30

Date: Monday, 7/9/2007 11:41:19 AM
 User: Kim Johnston

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services Drawing Name : 407 HIGH AFT X-TUBE ASSEMBLY
 Job Number : 33327
 Estimate Number : 10528
 P.O. Number : N/A Part Number : D407667205
 This Issue : 7/9/2007 S.O. No. : N/A Drawing Number : D407-667-245 REV D
 Prsht Rev. : NC Project Number : N/A
 First Issue : N/A Type : LANDING GEAR Drawing Revision : D
 Previous Run : 33326 Material : N/A
 Due Date : 7/23/2007 Qty: 1 Um: Each
 Written By :
 Checked & Approved By :
 Comment : Est Rev: C 05.09.02 Add holes for compatibility with Bell
 Skid tubes KJ/JLM
 Est Rev: D Added Magnobond, Rubber Cushion & Clamp
 07-02-19 JLM

Additional Product

| | | | |
|----------------|---------------------|--|-----------|
| DART | | TEL: 1-613-632-3336 FAX: 1-613-632-4228 | |
| PN | D407-667-205 | QTY | CHG004 |
| DESC | Cross tube Aft High | STC | SH01-5 |
| LOT | 33327 | STC | SR01304NY |
| WIP | 07-02-19 | STC | |
| MADE IN CANADA | | | |

Job Number:



Seq. #: Machine Or Operation: Description :

1.0

DC

DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Photocopy bluefile and create labels as per PPP D407-667-205CHG004

2.0

D6011115

Crosstube Material



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty Part number Description Batch

1 D6011-115 Crosstube B19510

Check OD = 2.750"; ID = 1.450"

J.L.

3.0

MORI SEIKI

MORI SEIKI CNC LATHE LARGE



Comment: MORI SEIKI CNC LATHE LARGE

1-Fill tube with sand & install plugs DT8531 on both ends as per Folio FA248

2-Turn first side as per Folio FA248

3-Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D407-667-245.

07/10/03

J.L. / J.F.

4.0

QC1

INSPECT ALL DIM TO DIM SHEET



Comment: INSPECT ALL DIM TO DIM SHEET

07/10/03

J.L. / J.F.

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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Part Number: D407667205

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Seq. #:

Machine Or Operation:

Description :

5.0

MORI SEIKI

MORI SEIKI CNC LATHE LARGE



Comment: MORI SEIKI CNC LATHE LARGE

1-Turn second side as per Folio FA248

2-Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D407-667-245

3-Remove sand and plugs

4-Scribe part # and batch # using vibrating stylus as per Dwg D407-667-245

Inside of Cuff(Donot engrave on outside of tube)

J.F./J.L 07/10/03

6.0

QC1

INSPECT ALL DIM TO DIM SHEET



Comment: INSPECT ALL DIM TO DIM SHEET

J.D J.L 07/10/03

7.0

QC8

SECOND CHECK



Comment: SECOND CHECK

SS 07/10/03

8.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Polish entire outside surface of crosstube

SR 7-10-9

9.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

C 07/10/03

10.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

Ensure no sand is in the tube before alodine.

J.D 7-10-10

11.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Bend tube as per Dwg D407-667-245 using CNC bender program 407 Aft and Folio FT

EL 7-11-5

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes ☒ No ☐ DQA: D Date: 07/12/30
 QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|----------|------|----------------------------------|-------------------------------|--|----------------|---------------------------|--------------------------------|--------------------------|
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| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| 07-10-05 | 11 | Height of tube is 23.42" | CP 0710.05 PC Q51042 | Acceptable. Lower cuff holes by 1/8" | 22 7-10-05 | | CP 07.10.05 PC Q51042 | |
| | | | | | | | | |
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Drawing Name: 407 HIGH AFT X-TUBE ASSEMBLY

Job Number: 33327

Part Number: D407667205

Job Number:



Seq. #:

Machine Or Operation:

Description :

12.0

QC6

6215

DIMENSIONAL CHECK



Comment: DIMENSIONAL CHECK

07.10.05

13.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Drill pilot holes in tube using drill Jig DT8583 & DT8584 as per Dwg D407-667-245. Drill all (3) top holes.

2-Drill and Ream all holes in tube to finish size using drill Jig DT8583 & DT8584 as per Dwg D407-667-245 Check dimensions between holes on all four sides.

3-Flip tube and switch drilling Jigs from right to left, left to right. Locate Jigs off existing holes using "T" pins

4-Drill pilot holes using drill Jig DT8583 & DT8584 as per Dwg D407-667-245. Drill only the top (2) holes.

5-Drill & ream the top (2) holes to finish size using drill Jig DT8583 & DT8584 as per Dwg D407-667-245

6-Drill Aft rivet holes using drill Jig DT8789 as per Dwg D407-667-245. Note: Aft side has 3x top holes.

7-Drill Fwd rivet holes using drill Jig DT8789 as per Dwg D407-667-245. Drill only the top (3) holes.

8-C'sink holes as per Dwg D407-667-245. Allow rivet to sit below surface to compensate for paint.

9-Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D407-667-245

EZ
7-11-7

507-11-13

14.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

507-11-13

15.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

507-11-150

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
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QA: N/C Closed: _____ Date: _____

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Job Number: 33327

Part Number: D407667205

Job Number:



Seq. #:

Machine Or Operation:

Description :

16.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

JA-11-15 (1)

17.0

OUTSIDE SERVICE

OUTSIDE SERVICES



Comment: Sub-Contracting OUTSIDE SERVICES

Liquid Penetrant Inspection as per QSI 038Or

Issue P/O: 5068 LPI as per ASTM 1417

Level 2 Attach copy of NDT results to work order

C 207/11/19 (1)

18.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Inspect for transit damage

Ensure copy of NDT results attached to work order.

C 207/11/16

19.0

QC6

DIMENSIONAL CHECK



Comment: Inspect for damage & ensure results are as per Dwg D407-667-245

JA-11-19 (1)

20.0

SPRAY PAINTING

SPRAY PAINTING



Comment: SPRAY PAINTING

1-Prime inside and outside crosstube as per QSI 005 4.2

2-Paint outside crosstube with White Imron as per QSI 005 4.2

7 m 07 11 19 (1)

21.0

QC14

INSPECT SPRAY PAINT



Comment: Inspect Spray Paint

Wrap in plastic bag to protect from scratches

JA-11-20 (1)

22.0

D2856400

Abrasion Strip



Comment: Qty.: 1.3524 f(s)/Unit Total : 1.3524 f(s)

Pick:


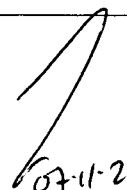


Qty Part number Description Batch

2 D2856-400(Cut to 7.73") Abrasion Strip

34642 m 07 11 21

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes ☒ No ☐ DQA: ☒ Date: 07/11/21
 QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|----------|------|--|--|---|----------------|--|--|--|
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| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| 07/11/20 | 22.0 | Abrasion strip was off centered according to drawing |  | Remove, strip Polish tube and re-locate abrasion strip replace x2 B.34642 | M 07/11/21 |  07/11/21 |  Resolute |  07/11/21 |
| | | | | | | | | |
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Job Number: 33327

Part Number: D407667205

Job Number:



Seq. #:

Machine Or Operation:

Description :

23.0

D2873043

Nut Plate Assembly



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Qty Part number Description Batch

2 D2873-043

Nut Plate

33422

ml 07 11 18

24.0

D2873045

Nut Plate Assembly



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Qty Part number Description Batch

2 D2873-045

Nut Plate

34077

ml 07 11 18

25.0

D28941

2.750 Support



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty Part number Description Batch

1 D2894-1

Support

19163

ml 07 11 21

26.0

D31901

Chafing Shield



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Qty Part number Description Batch

2 D3190-1

Chafing Shield

31071

ml 07 11 21

27.0

D3595

Rubber Cushion (per sq ft)



Comment: Qty.: 0.0246 sf(s)/Unit Total : 0.0246 sf(s)

Rubber Cushion

2X .750" X 4.30"

Batch:

35124

ml 07 11 29

28.0

MS20601AD4W8

RIVET



Comment: Qty.: 14.0000 Each(s)/Unit Total : 14.0000 Each(s)

Pick:

Qty Part number Description Batch

14 MS20601AD4W8 Rivet

105057

ml 07 11 18

Dart Aerospace Ltd

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
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Job Number: 33327

Part Number: D407667205

Job Number:



Seq. #:

Machine Or Operation:

Description :

29.0

MS2192022

Clamp(per MIL-DTL-8783C)



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Pick:

Qty Part number Description Batch

4 MS21920-22

Clamp

M105799

ml 07 11 21

30.0

MS2192025

Clamp(per MIL-DTL-8783C)



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Clamp(per MIL-DTL-8783C)

Batch:

~~106119~~ 106341

ml 07 11 29

31.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

Time: 10:30 AM

P70

1-Install abrasion strips as per QSI 035 using DT8674. Install chafing shield as per Dwg D407-667-245. Note: (3) top holes should be facing up.

2-Install support with magnobond and install clamps as per Dwg D407-667-245. Torque clamps to 80-100 in lb

A/R Magnobond

Batch: M105379
exp: 05/08

ml 07-11-21

3-Install nut plates as per Dwg D407-667-245. Touch up rivet heads with Imron paint.

ml 07 11 18

32.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

5 7/11/29 GP

33.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Pick Packing Kit

34.0

AN534A

Bolt



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Bolt

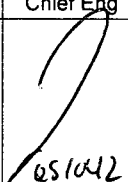
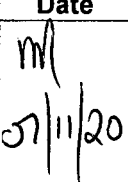
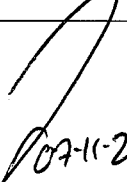
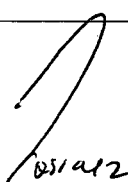
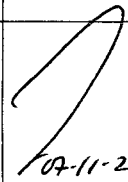
Batch:

M105408

7/11/30 see (1x)

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes ☒ No ☐ DQA: DE Date: 07/11/20
 QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|----------|------|--|--|--|--|--|--|--|
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| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| 07-11-20 | 31.0 | 1x B2894-1 was fully puncher contacted. B19163 |  QS1042 | - remove P. Coat from inside of support. - Prime per QS1005, inside only. |  07/11/20 |  07-11-21 |  QS1042 |  07-11-20 |
| | | | | | | | | |
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Job Number:



Seq. #:

Machine Or Operation:

Description :

35.0

MS21042L5

Nut



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)
Nut
Batch: M105430

50

36.0

AN510A

Bolt



Comment: Qty.: 10.0000 Each(s)/Unit Total : 10.0000 Each(s)
Pick:Packing Kit
Qty Part number Description Batch
10 AN5-10A Bolt M104156

50

37.0

AN532A

Bolt



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)
Pick:Packing Kit
Qty Part number Description Batch
4 AN5-32A Bolt M104931

50

38.0

AN960JD516

Washer



Comment: Qty.: 18.0000 Each(s)/Unit Total : 18.0000 Each(s)
Pick:Packing Kit
Qty Part number Description Batch
18 AN960JD516 Washer M104156

7/11/30 50

(1X)

39.0

QC4

INSPECT 100% KITS FOR COMPLETENESS



Comment: INSPECT 100% KITS FOR COMPLETENESS

7/11/30 35955

40.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D407-667-205

Location: _____

PPP Rev: _____

PPP 35955

7/11/30 (1)

41.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

7/11/30 (1)

7/11/30

Dart Aerospace Ltd

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
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NOTE: Date & initial all entries

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|---|----------------------------------|
| DART AEROSPACE LTD | Work Order: 33327 |
| Description: Crosstube Assembly | Part Number: D407-667-245 |
| Inspection Dwg: D407-667-245 Rev: D | Page 1 of 1 |

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

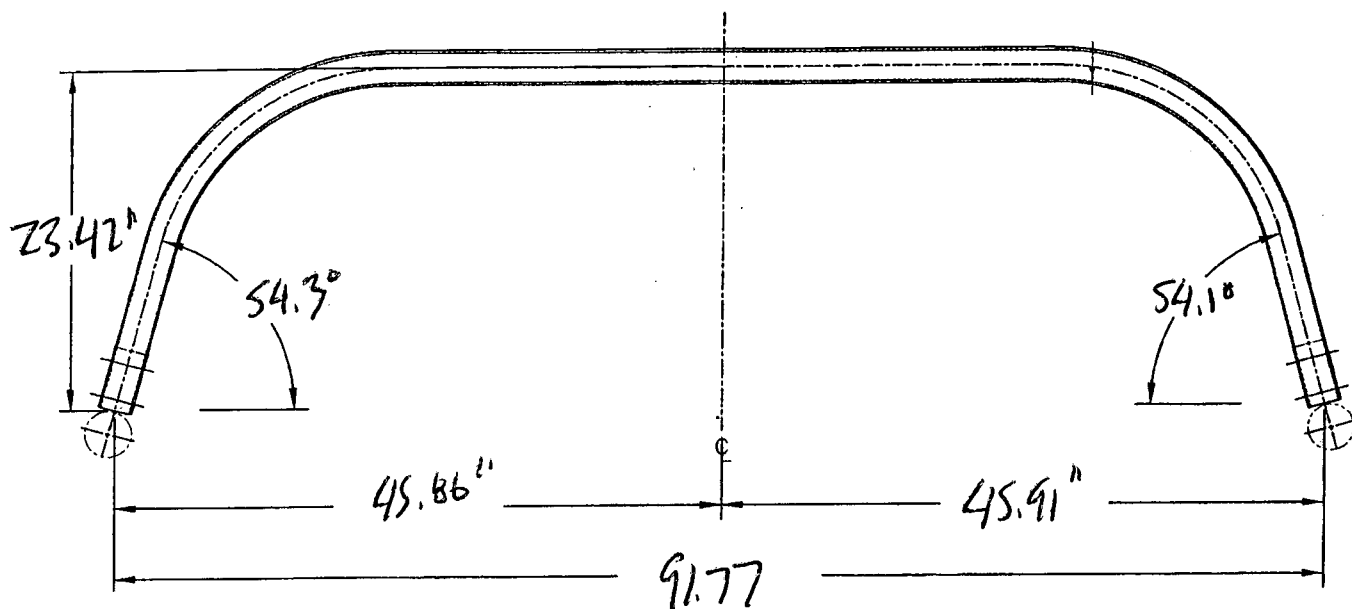
| Inspection Sheet Drawing Dimension | Tolerance | Actual Dimension | Accept | Reject | Method of Inspection | Comments |
|---------------------------------------|-----------|---------------------|--------|--------|-------------------------|----------|
| SIDE A | 2.490 | +0.005/-0.000 | 2.493" | ✓ | | |
| | 1.832 | +0.005/-0.000 | 1.834" | ✓ | | |
| | 1.838 | +0.005/-0.000 | 1.842" | ✓ | | |
| | 1.892 | +0.005/-0.000 | 1.896" | ✓ | | |
| | 2.052 | +0.005/-0.000 | 2.056" | ✓ | | |
| | 2.206 | +0.005/-0.000 | 2.209" | ✓ | | |
| | 2.521 | +0.005/-0.000 | 2.523" | ✓ | | |
| | 2.633 | +0.005/-0.000 | 2.635" | ✓ | | |
| | 4.10 | +/-0.030 | 4.1 | ✓ | | |
| | 4.978 | +/-0.030 | 4.981" | ✓ | | |
| | 2.040 | +0.000/-0.010 | 2.036 | ✓ | | |
| | 0.125 | +/-0.010 | .125 | ✓ | | |
| | R0.063 | +/-0.010 | r.063 | ✓ | | |
| | R0.500 | +/-0.010 | r.500 | ✓ | | |
| | | | | | | |
| SIDE B | 2.490 | +0.005/-0.000 | 2.492" | ✓ | | |
| | 1.832 | +0.005/-0.000 | 1.836" | ✓ | | |
| | 1.838 | +0.005/-0.000 | 1.842 | ✓ | | |
| | 1.892 | +0.005/-0.000 | 1.896" | ✓ | | |
| | 2.052 | +0.005/-0.000 | 2.056" | ✓ | | |
| | 2.206 | +0.005/-0.000 | 2.209" | ✓ | | |
| | 2.521 | +0.005/-0.000 | 2.524" | ✓ | | |
| | 2.633 | +0.005/-0.000 | 2.635" | ✓ | | |
| | 4.10 | +/-0.030 | 4.1 | ✓ | | |
| | 4.978 | +/-0.030 | 4.960" | ✓ | | |
| | 2.040 | +0.000/-0.010 | 2.035 | ✓ | | |
| | 0.125 | +/-0.010 | .125 | ✓ | | |
| | R0.063 | +/-0.010 | r.063 | ✓ | | |
| | R0.500 | +/-0.010 | r.500 | ✓ | | |
| | 112.91 | +/-0.020 | 112.91 | ✓ | | |
| | | | | | | |

| | | | |
|------------------------------|-------------------------|----------------------------|-----|
| Measured by: J.L.B.F. | Audited by: J.F. | Prototype Approval: | N/A |
| Date: 07/10/02 | Date: 07/10/03 | Date: | N/A |

| Rev | Date | Change | Revised by | Approved |
|-----|----------|---------------------------------------|------------|----------|
| A | 04.04.21 | New Issue (P/O D407-667-205) | KJ/RF | |
| B | 06.03.09 | Dwg Rev updated | KJ/JLM | |
| C | 06.03.30 | Tolerance revised for 4.978 dimension | KJ/JLM | |
| D | 07.02.19 | Dwg Rev updated | KJ/JLM | |

| | | |
|---|---------------------|---------------------|
| DART AEROSPACE LTD | Work Order: | 33327 |
| Description: Crosstube High Aft (407) | Part Number: | D407-667-205 |
| Inspection Dwg: D407-667-245 Rev: D | | Page 1 of 1 |

| Required Dimension | Min | Max |
|--------------------|-------|-------|
| Height | 23.46 | 23.58 |
| 1/2 Span | 45.86 | 45.98 |
| Angle | 54 | 56 |
| Total Span | 91.72 | 91.96 |



| Comments |
|----------|
| |
| |
| |
| |
| |

| | |
|-----------------|-----------|
| QC15 Inspection | <i>GP</i> |
| Date | 07.10.05 |

| Rev | Date | Change | Revised by | Approved |
|-----|----------|-----------|----------------|-----------|
| A | 07.02.06 | New Issue | KJ/JM <i>A</i> | <i>Jm</i> |

DART

| | | | |
|-------------------------------|--------------------------------|--|------------------------|
| DESIGN <i>PH</i> | DRAWN BY <i>PH</i> | DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA | |
| CHECKED <i>[Signature]</i> | APPROVED <i>[Signature]</i> | DRAWING NO. D407-667-245 | REV. D SHEET 1 OF 3 |
| DATE 07.02.07 | | TITLE CROSSTUBE ASS'Y (407 HIGH AFT) | SCALE NTS |
| A | 02.05.13 | NEW ISSUE | |
| B | 03.05.21 | ADD CHAFING SHIELD | |
| C | 05.07.26 | ADD HOLES AND NUT PLATES FOR COMPATABILITY WITH BHT/AA SKIDTUBES | |
| D | 07.02.07 | ADD VIEW FOR OEM SKID HOLES, ROTATE ORIENTATION OF CLAMPS SECTION F-F, REMOVE -851 ABRASION STRIP, ADD MAGNOBOND 6398, ADD CUSHION | |

RELEASED

07.02.14 *[Signature]*

| Qty | Part Number | Description |
|-----|---------------|-----------------------------------|
| X | D407-667-245 | CROSSTUBE ASSEMBLY (407 HIGH AFT) |
| 1 | D6011-115 | CROSSTUBE |
| 2 | D2856-400-773 | ABRASION STRIP |
| 2 | D2873-043 | NUT PLATE |
| 2 | D2873-045 | NUT PLATE |
| 1 | D2894-1 | SUPPORT |
| 2 | D3190-1 | CHAFING SHIELD |
| 2 | D3595-075-430 | RUBBER CUSHION |
| 14 | MS20601AD4W8 | RIVET (OR NAS9302B-4-8) |
| 4 | MS21920-22 | CLAMP |
| 2 | MS21920-25 | CLAMP (OR MS21920-24) |

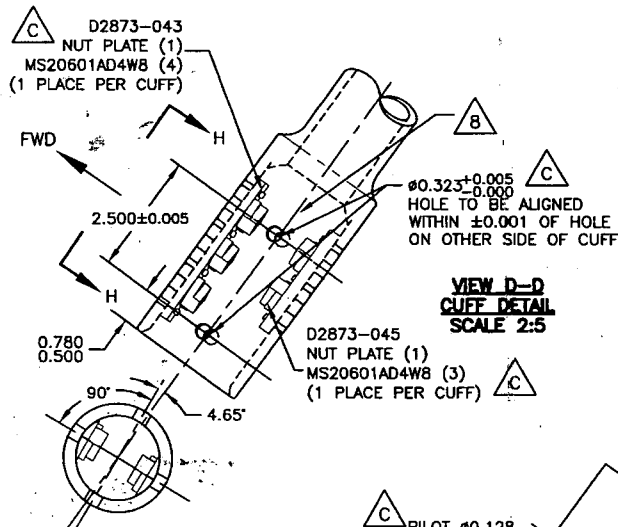
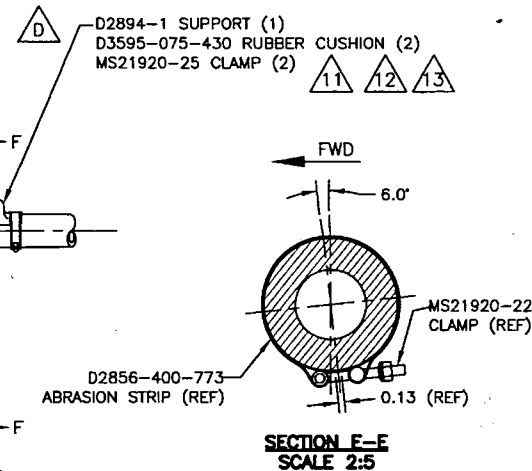
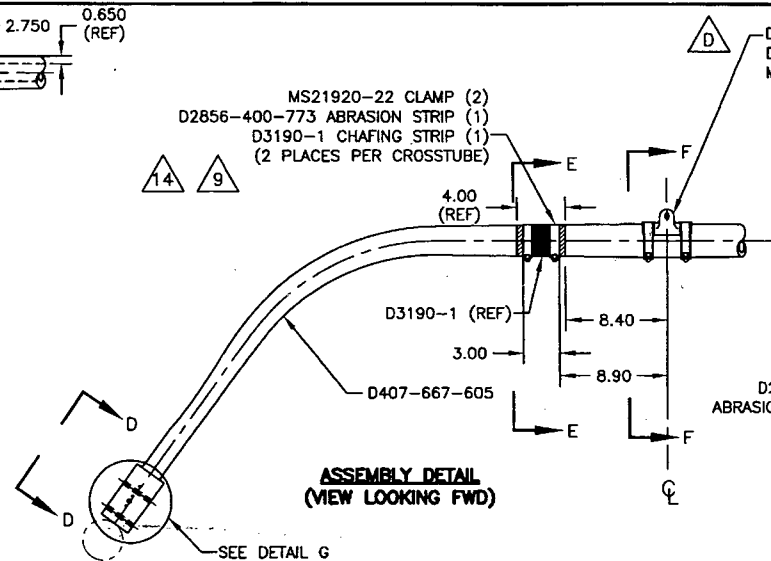
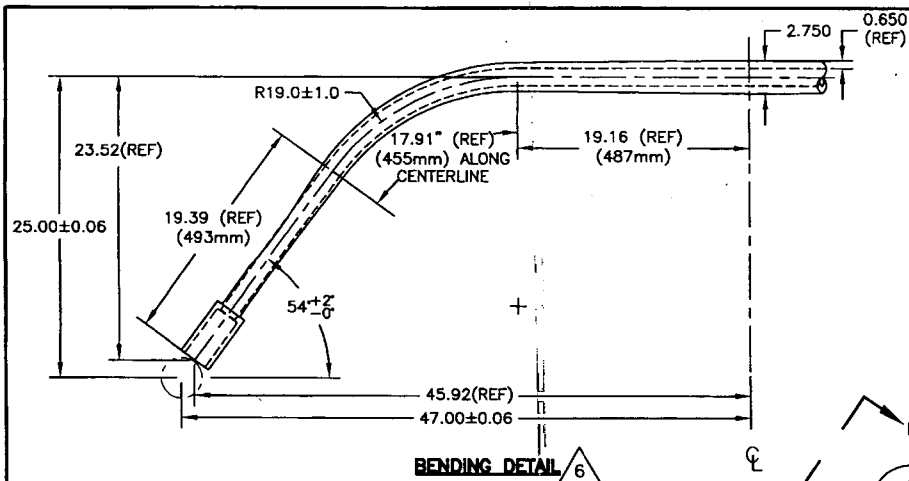
GENERAL NOTES:

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 2) MATERIAL: MANUFACTURED FROM D6011-115
FINISHED LENGTH = 112.91±0.020
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
PAINT OUTSIDE PER DART QSI 005 4.2
- 4) PART IS SYMMETRIC ABOUT CENTERLINE.
- 5) RUN-OFF PART. BLEND OUT EDGE LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH.
- 6) BEND PROGRESSIVELY WITH A MINIMUM OF 6 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- 7) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- 8) SCRIBE DART PART NUMBER AND BATCH NUMBER IN THIS AREA WITH VIBRATING STYLUS.
- 9) INSTALL D2856-400-773 ABRASION STRIP WITH A 0.13 (REF) GAP ON BOTTOM SIDE OF CROSSTUBE, PER QSI 035.
- 10) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 11) INSTALL D2894-1 CENTER SUPPORT USING A 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 PER QSI 015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
- 12) INSTALL MS21920-25 CLAMPS WITH D3595-075-430 RUBBER CUSHIONS TO SECURE D2894-1 SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMPS ARE OPPOSITE CROSSTUBE SUPPORT.
NOTE: MS21920-24 CLAMPS CAN BE USED TO ACCOMMODATE VARYING DIAMETERS. ENSURE THERE IS A MINIMUM OF 1.5 THREADS IN SAFETY ON THE NUTS.
- 13) TORQUE CLAMPS 80 TO 100 IN-LB.
- 14) INSTALL D3190-1 CHAFING SHIELDS SO THAT OVERLAP IS ON BOTTOM SIDE OF CROSSTUBE OPPOSITE D2894-1 SUPPORT.

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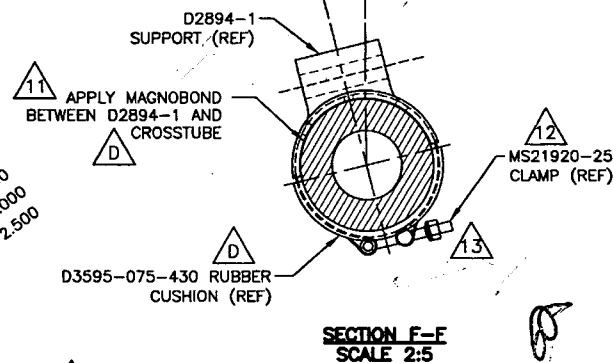
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C #0.323±0.005
HOLE TO BE ALIGNED WITHIN ±0.001
OF HOLE ON OTHER SIDE OF CUFF
(TYP 3 PLACES PER CUFF)

C PILOT #0.128
C'SINK #0.225X100"
(TYP 4 PLACES PER CUFF)

VIEW H-H
SCALE 2:5
(VIEW LOOKING AFT, ROTATED)



C PILOT #0.128
C'SINK #0.225X100"
(TYP 3 PLACES PER CUFF)

C #0.323±0.005
HOLE TO BE ALIGNED WITHIN ±0.001
OF HOLE ON OTHER SIDE OF CUFF
(TYP 2 PLACES PER CUFF)

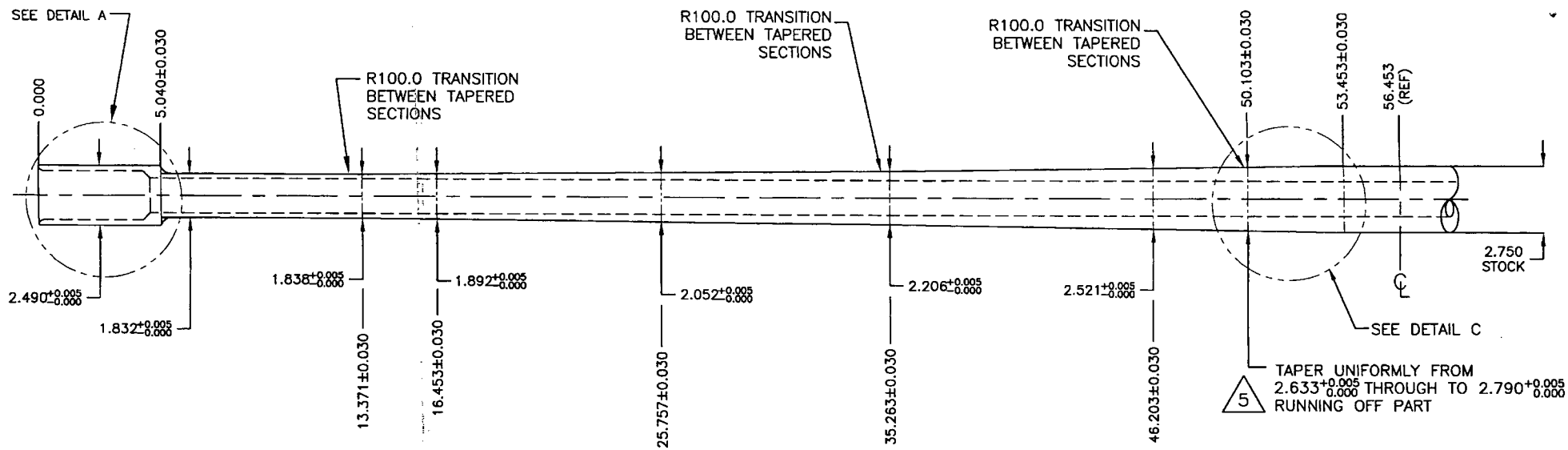
DETAIL G
SCALE 2:5
(VIEW LOOKING FWD)

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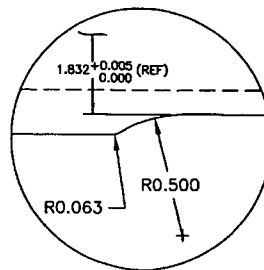
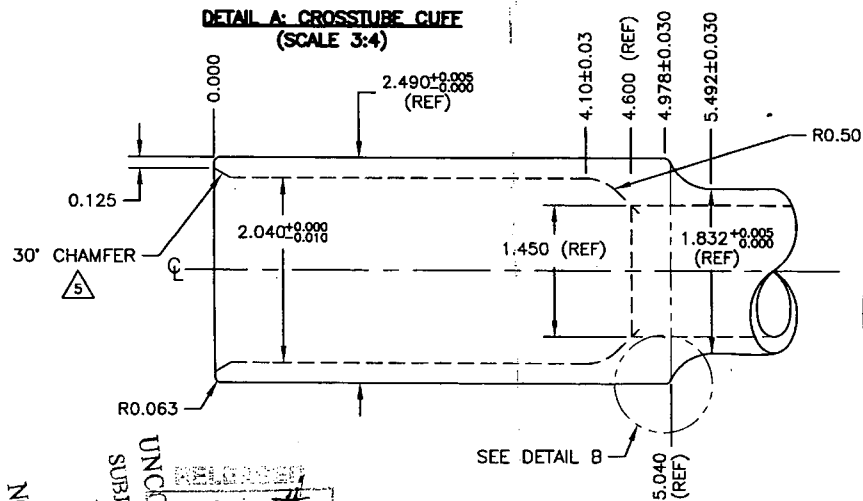
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| | | | | | |
|---------|----------|----------|--------------------------------|--------------|---|
| DESIGN | PH | DRAWN BY | PH | DART | DART AEROSPACE LTD. MISSISSAUGA, ONTARIO, CANADA |
| CHECKED | # | APPROVED | # | DRAWING NO. | REV. D |
| DATE | 07.02.07 | TITLE | CROSSTUBE ASS'Y (407 HIGH AFT) | D407-667-245 | SHEET 2 OF 3 |
| | | SCALE | 1:10 | | |



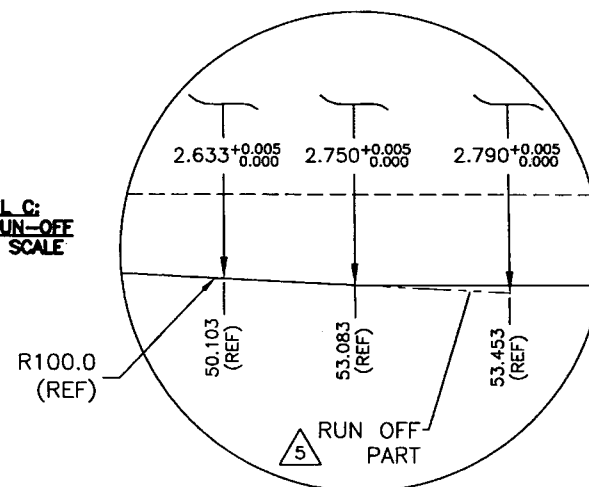
D407-667-245 MACHINING DETAIL

DETAIL A: CROSSTUBE CUFF
(SCALE 3:4)



DETAIL B: CUFF
TRANSITION
SCALE 2:1

DETAIL C:
TAPER RUN-OFF
NOT TO SCALE



NO. 33327

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| | | | | | |
|---------|----------|----------|--------------------------------|-------------|---|
| DESIGN | PH | DRAWN BY | PH | DART | DART AEROSPACE LTD. HAMPSHIRE, ONTARIO, CANADA |
| CHECKED | PH | APPROVED | PH | DRAWING NO. | D407-667-245 |
| DATE | 07.02.07 | TITLE | CROSSTUBE ASS'Y (407 HIGH AFT) | REV. D | SHEET 3 OF 3 |
| | | | | SCALE | 1:4 |



LIQUID PENETRANT TEST REPORT

P - 1200 1

| | | | | | | | |
|------------------|---|----------------|-------------|---------------|-----------------------------|-----------------------------|-------------------|
| CLIENT | DART AEROSPACE | DATE | NOV 16 2007 | PAGE | 1 | OF | 2 |
| ATTENTION | LINDA LACELLE | ACUREN JOB NO. | 188 07 1200 | TIME | AM <input type="checkbox"/> | PM <input type="checkbox"/> | |
| ADDRESS | 1270 ABERDEEN ST HAWKESBURY, ONT. | PO/NO No. | SOLG | WORK LOCATION | HAWKESBURY | ACCEPTANCE STD. | ASTM 1417/QSI-038 |
| PROJECT | OH 58 FWD/AFT, 206L FWD/AFT, 407 HIGH AFT X TUBES | | | REV./DATE | 2005 | | |
| ITEM(S) EXAMINED | JOB #S OH 58: 33146, 33147, 33148, 33152, 35532, 35533, 35534, 35535. JOB #S 407: 33327 | | | | | | |
| | JOB #S 206L: 35043, 35305, 35306. | | | | | | |

| | | | | |
|--|-----------------------|-----------|------------------------|-----------|
| JOB DESCRIPTION | PROCEDURE NO. LT-0002 | REV./DATE | TECHNIQUE NO. LT-TECH2 | REV./DATE |
| 'PART NO. D206667203/D206667103BL/D05876101,201/D407667205 MATERIAL ALODINED ALUM. THICKNESS | | | | |
| SCOPE WET FLOURESCENT LIQUID PENETRANT INSPECTION CARRIED OUT ON 100% EXTERNAL SURFACE | | | | |

TEST DETAILS

| | | | | | |
|-----------------------|---|----------------------------------|--|--|--|
| METHOD | <input checked="" type="checkbox"/> FLUORESCENT | <input type="checkbox"/> VISIBLE | <input checked="" type="checkbox"/> WATER WASH | <input type="checkbox"/> SOLVENT REMOVABLE | <input type="checkbox"/> POST EMULSIFIED |
| FAMILY BRAND | MAGNAFLUX | | BLACK LGHT8171 | <input type="checkbox"/> OUTPUT > 1000 μ W/cm ² | <input type="checkbox"/> AMBIENT < 2 fc |
| PENETRANT ZL67 | MINIMUM DWELL TIME | 45 MIN. | LIGHTING EQUIP. | <input type="checkbox"/> FLASHLIGHT | <input type="checkbox"/> TROUBLELIGHT |
| PENETRANT REMOVER H2O | MINIMUM DRY TIME | >10 MIN. | OTHER | CAL SEP 18 07 | |
| DEVELOPER SKDS2 | MINIMUM DWELL TIME | 10 MIN. | LIGHT METER S/N | CAL DUE DATE | |
| DEVELOPER TYPE | <input checked="" type="checkbox"/> NON AQUEOUS | <input type="checkbox"/> AQUEOUS | <input type="checkbox"/> DRY | | |

TEST SURFACE

| | | | | | |
|---------------------|--------------------------------------|---|--|---------------------------------------|--|
| SURFACE CONDITION | <input type="checkbox"/> AS GROUND | <input checked="" type="checkbox"/> AS WELDED | <input type="checkbox"/> MACHINED | <input type="checkbox"/> SHOT BLASTED | <input checked="" type="checkbox"/> CLEAN BARE METAL |
| SURFACE TEMPERATURE | <input type="checkbox"/> < -4°C/20°F | <input type="checkbox"/> -4°C/20°F TO 10°C/50°F | <input type="checkbox"/> 10°C/50°F TO 52°C/125°F | <input type="checkbox"/> > 52°C/125°F | |

RESULTS- (☐ METRIC ☒ IMPERIAL)

FLUORESCENT LIQUID PENETRANT INSPECTION
CARRIED OUT ON 100% EXTERNAL SURFACE ON:

206L FWD X TUBES JOB#s 35305
206L AFT X TUBES JOB#s: 35043, 35306
OH58 FWD X TUBES JOB#s: 33146, 33147, 33148, 35532
OH58 AFT X TUBES JOB#s: 33152, 35533, 35534, 35535
407 HIGH AFT TUBE JOB#: 33327

RESULTS: NO INDICATION OF DEFECTS.

ITEMS ACCEPTABLE TO STANDARD.

Scope of Services

The agreement of Acuren Group Inc. to perform services extends only to those services provided for in writing. Under no circumstances shall such services extend beyond the performance of the requested services. It is expressly understood that all descriptions, comments and expressions of opinion reflect the opinions or observations of Acuren Group Inc. based on information and assumptions supplied by the owner operator and are not intended nor can they be construed as representations or warranties. Acuren Group Inc. is not assuming any responsibilities of the owner operator and the owner operator retains complete responsibility for the engineering, manufacture, repair and use decisions as a result of the data or other information provided by Acuren Group Inc. In no event shall Acuren Group Inc.'s liability in respect of the services referred to herein exceed the amount paid for such services.

Standard of Care

In performing the services provided, Acuren Group Inc. uses the degree, care and skill ordinarily exercised under similar circumstances by others performing such services in the same or similar locality. No other warranty, expressed or implied, is made or intended by Acuren Group Inc.

SIGNATURES

| | | | |
|-------------------------|----------------------------|----------------------------|-----------|
| CLIENT REPRESENTATIVE | | DTR # E27347 | |
| TECHNICIAN (SIGNATURE): | | REPORT REVIEWED BY: | |
| NAME (PRINT): | JASON HEWETT | NAME INITIALS | |
| | 1 ST TECHNICIAN | 2 ND TECHNICIAN | |
| CGSB LEVEL | 2 | CGSB LEVEL | SNT LEVEL |
| CGSB REG. NO | 6156 | CGSB REG. NO | |

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